CLAIMS:

1.   An apparatus for generating images of a human or animal body on the basis of
3D-constructions from 3D-XRAY or 3D-Computer Tomography measurements, which
bodies comprise both natural tissue and one or more high-density objects, said apparatus
comprising a measuring facility for executing said measurements, a distinguishing facility for
5   distinguishing said one or more high-density objects and executing a separating procedure
thereon for generating an improved image of regions of said natural tissue,
            said apparatus being characterized by:
            a ramp-filtering facility for applying a ramp filter in the direction of rotation to
such various projection measurements and a back-projecting facility fed by said ramp-
10 filtering facility for back-projecting the various so filtered projections into a 3D-volume
reconstruction (Figure 2b);
            a segmenting facility fed by said back-projecting facility for in said 3D-
volume reconstruction segmenting said one or more high-density objects by a thresholding
procedure and a forward projecting facility fed by said segmenting facility for executing a
15 forward projection of the shadow(s) of the segmented one or more high-density objects onto
the ramp-filtered projection (Figure 2c), whilst marking the borders of said one or more high
density objects in the ramp-filtered back-projections;
            a suppressing facility fed by said forward projecting facility for suppressing
said reconstructed one or more high-density objects from the original projection
20 measurementsand said suppressing facility is operative for executing an appropriate
substitution of gray values derived from a physical neighbourhood of said one or more high-
density objects instead of said one or more high-density objects in question. (Figure 2d);
            and a retro-coupling facility fed by said suppressing facility for executing a
back-projection of the various filtered projections with corrected profiles through exclusion
25 of said suppressed one or more high-density objects and outputting a reconstruction result
(Figure 2e).

2.   An apparatus as claimed in Claim 1, and furthermore comprising a superimposing facility fed by said forward projecting facility for receiving said one or more high-density objects for superimposing thereof onto said reconstruction result.

5   3.   An apparatus as claimed in Claim 1, and comprising adapting means for relatively adapting the gray values of said one or more high-density objects and said natural tissue in a predetermined gray value range to show both of them at the same time.

4.   A method for using an apparatus as claimed in Claim 1, for generating images
10   of a human or animal body on the basis of 3D-constructions from 3D-XRAY or 3D-Computer Tomography measurements, which bodies comprise both natural tissue and one or more high-density objects, said method comprising the steps of executing said measurements, distinguishing said one or more high-density objects and executing a separating procedure thereon for generating an improved image of regions of said natural tissue,
15   said method being characterized by comprising the steps of:
             applying a ramp filter in the direction of rotation to such various projection measurements and back-projecting the various filtered projections into a 3D-volume reconstruction (Figure 2b);
                    in said 3D-volume reconstruction segmenting said one or more high-density
20   objects by a thresholding procedure and executing a forward projection of the shadow(s) of the segmented one or more high-density objects onto the ramp-filtered projection (Figure 2c), thus marking the borders of said one or more high density objects in the ramp-filtered back-projections;
                    suppressing said reconstructed one or more high-density objects from the
25   original projection measurements whilst executing an appropriate substitution of gray values derived from a physical neighbourhood of said one or more high-density objects instead of said one or more high-density objects in question. (Figure 2d);
                    and secondarily executing a back-projection of the various filtered projections with corrected profiles and thereby without said suppressed one or more high-density objects
30   (Figure 2e).

5.   A computer program comprising instructions for executing the method steps as claimed in Claim 4 through controlling an apparatus as claimed in Claim 1.

6.   A computer program product being embedded in a machine read-only tangible medium and containing instructions for executing the method steps as claimed in Claim 5 through controlling an apparatus as claimed in Claim 1.